

ABSTRACT

An air-filled pipette for accurately metering small and large volumes of fluid samples is provided. The pipette has dual resolution capability such that the pipette can accurately aspirate a wide range of sample volumes. The pipette may include an extension mandrel within the pipette tip, which helps to reduce the internal volume within the pipette. The dual resolution capability and/or the extension mandrel help to minimize the internal volume of air within the pipette so that measurement error associated with the compression or expansion of air within the pipette is minimized.

Multiple pipettes may also be arranged to form a pipetting module for the metering of multiple sample volumes simultaneously and automatically. The pipette includes a channel block having at least one cylindrical passage, a rod, sized, shaped, and aligned to pass into the cylindrical passage, and a cylinder, having an axially extending passage therethrough, sized, shaped and aligned to pass into the cylindrical passage. A method for mixing multiple fluid samples within a pipette is also provided.